

### **3. HISTORY AND CURRENT DISTRIBUTION**

Historically, whooping cranes ranged widely, primarily relying on diverse, productive wetland ecosystems available for over-wintering, breeding, and migration stopovers. Prior to the influx of white settlers, evidence suggests the historical range extended from the Arctic coast south to central Mexico, and from Utah east to New Jersey, South Carolina, Georgia, and Florida (Allen, 1952; Nesbitt, 1982; Hayes & Barzen, 2003) (Fig. 1).

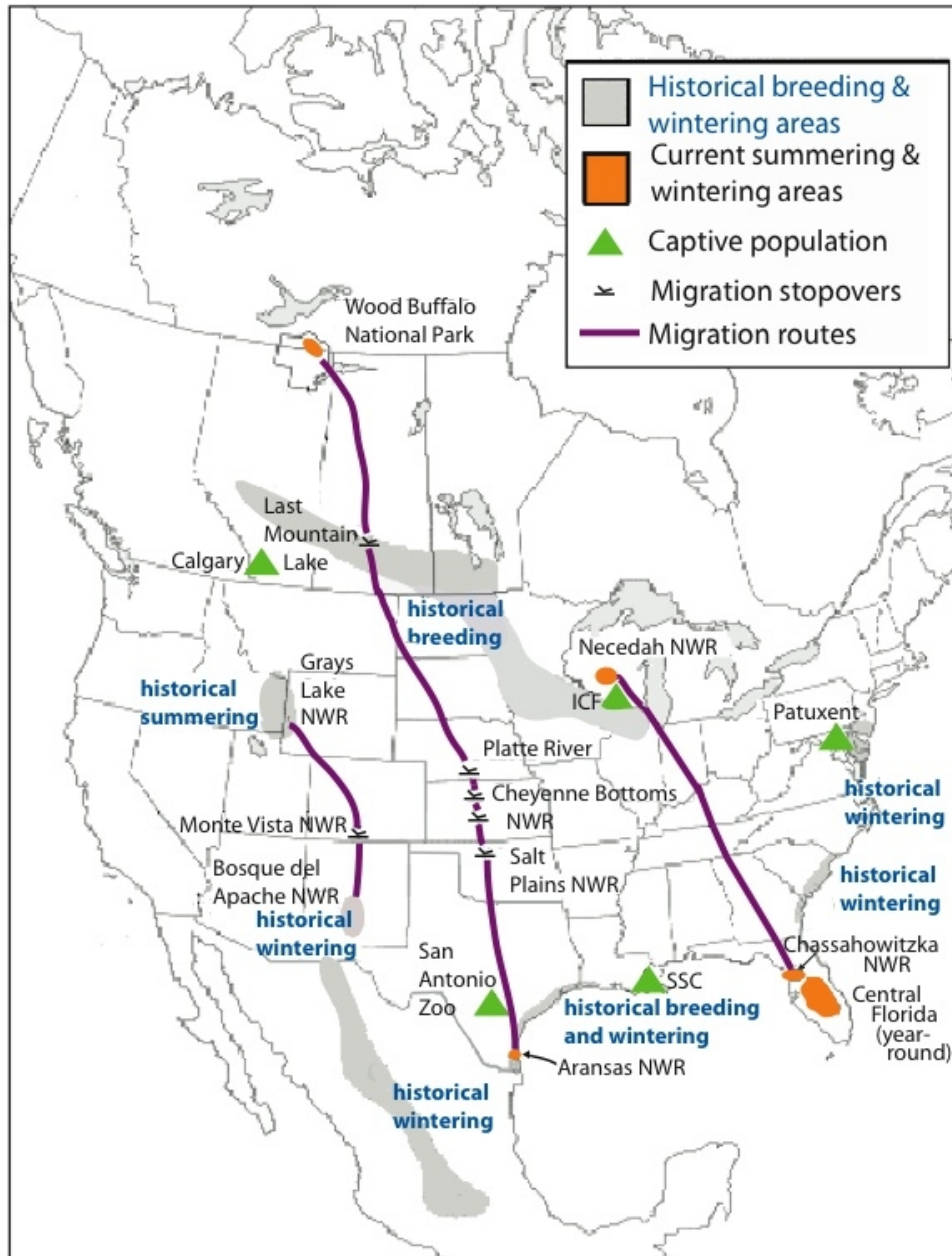
During the 19th and 20th centuries, the whooping cranes' primary summer (breeding) habitat extended from central Illinois, northwestern Iowa, northwestern Minnesota, and northeastern North Dakota northwesterly through southwestern Manitoba, southern Saskatchewan and into east-central Alberta. The whooping cranes' principal wintering range included the tall grass prairies, southwestern Louisiana, the Gulf Coast of Texas, and northeastern Mexico near the Rio Grande Delta. Other significant wintering areas included the interior tablelands in western Texas and the high plateaus of central Mexico, where whooping cranes coexisted with thousands of sandhill cranes (Allen, 1952).

#### **3.1 WISCONSIN HISTORIC RANGE**

Limited historical records indicate whooping cranes may have migrated through Wisconsin and may have been "breeding to some extent" (Kumlien & Hollister, 1903). The Milwaukee Public Museum holds the only known Wisconsin specimen, although collection details are incomplete (Robbins, 1991).

Documented whooping crane sightings prior to 1884 include five reports between 1840-1850 (Allen, 1952); occasional sightings in western Wisconsin; twelve sightings in southeastern Wisconsin (Hoy, 1885); observations along the southwest section of the Mississippi River; a specimen located adjacent to the Sugar River in Dane County; a specimen from Green County; and a 1884 Twin Bluffs sighting (Kumlien & Hollister, 1903). An unconfirmed report sites a whooping crane nest in Brown County, Wisconsin (Carr, 1890). There is a confirmed nesting report in Dubuque County, Iowa, adjacent to Grant County, Wisconsin (Allen, 1952).

On April 17, 1959, Owen Gromme observed two birds in Waukesha county. These birds apparently wandered off-course during their northward migration between Texas and Canada. On November 11, 1998, following a period of extremely high westerly winds, a lone whooping crane was sighted and photographed at Illinois Beach State Park, Illinois, just south of the Wisconsin border. The location of this sighting suggests this individual traveled through Wisconsin on its southward path.



**Figure 1.** Historical and current breeding and wintering areas and migration routes of whooping cranes (adapted from Meine & Archibald, 1996).

### 3.2 ABUNDANCE AND CURRENT DISTRIBUTION

Historic records of home range size and population trends suggest that over 10,000 whooping cranes may have journeyed across North America. Between 1860 and 1870, the whooping crane population was estimated to be between 500 – 1400 individuals (Banks, 1978; Allen, 1952). By 1870 the species may have already been greatly reduced in number, disappearing from the heart of its breeding range by the 1890s (Stehn & Johnson, 1987).

By 1944, only 21 birds remained in two small breeding populations, a non-migratory population inhabiting the area around White Lake, southwestern Louisiana, and the migratory Texas population that wintered at Aransas National Wildlife Refuge (NWR). The last reported reproduction in the non-migratory Louisiana population occurred in 1939 (Gomez, 1992; Drewien, Tautin, Courville, & Gomez, 2001). In 1950 the Louisiana population ceased to exist. The nesting area of the Texas population was discovered in 1954 in Wood Buffalo National Park (WBNP), in the Northwest Territories of Canada.

Due to the efforts of the IWCRT, WCEP, and the many diverse partners involved in whooping crane recovery, there are an estimated 135 captive cranes and 336 wild cranes in three separate populations (March 2006) as described below.

### **3.2.1 Aransas-Wood Buffalo Population**

The Aransas-Wood Buffalo population (AWBP) consists of 214 cranes (March 2006). It is the only self-sustaining wild population. Nesting occurs in the Northwest Territories and adjacent areas of Alberta, Canada, primarily within the boundary of WBNP (Johns, 1998a, 1998b). In 2005, 58 of the 73 known adult pairs nested; 30 chicks fledged.

The AWBP migrates southeasterly through Alberta, Saskatchewan and eastern Manitoba, stops-over in southern Saskatchewan, and continues through the Great Plains states of eastern Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas (Fig. 2). The population winters in estuarine marshes, shallow bays, tidal flats, and adjacent uplands along 56km of the Gulf of Mexico coast in the Aransas NWR and adjacent areas. In spring they reverse the migratory route.

### **3.2.2 Florida Non-migratory Population**

Beginning in 1993, reintroductions over a 13-year period established this non-migratory Florida population (FP). This reintroduced whooping crane population is designated nonessential experimental (refer to Legal Aspects of Recovery, Section 4.1). Located primarily on the Kissimmee Prairie and surrounding areas south of Orlando, Florida, the habitat of this population consists of 500,000 ha of freshwater marsh and open grasslands associated with the flood plain of the Kissimmee River in Osceola and Polk Counties.

Productivity is very low and mortality rates high for this population. In 1999, two pairs produced eggs but no chicks. In 2002, a chick successfully fledged; the first chick fledged in the eastern U.S. since 1939. Between 1999 and 2005, four pairs laid eggs, seventeen chicks hatched, and four fledged. As of March 2006, approximately 58 wild birds survive from 289 captive-reared reintroduced whooping cranes. Consequently, the IWCRT is reassessing the success of this reintroduction program. No birds are scheduled for 2006 release and none were released in 2005.



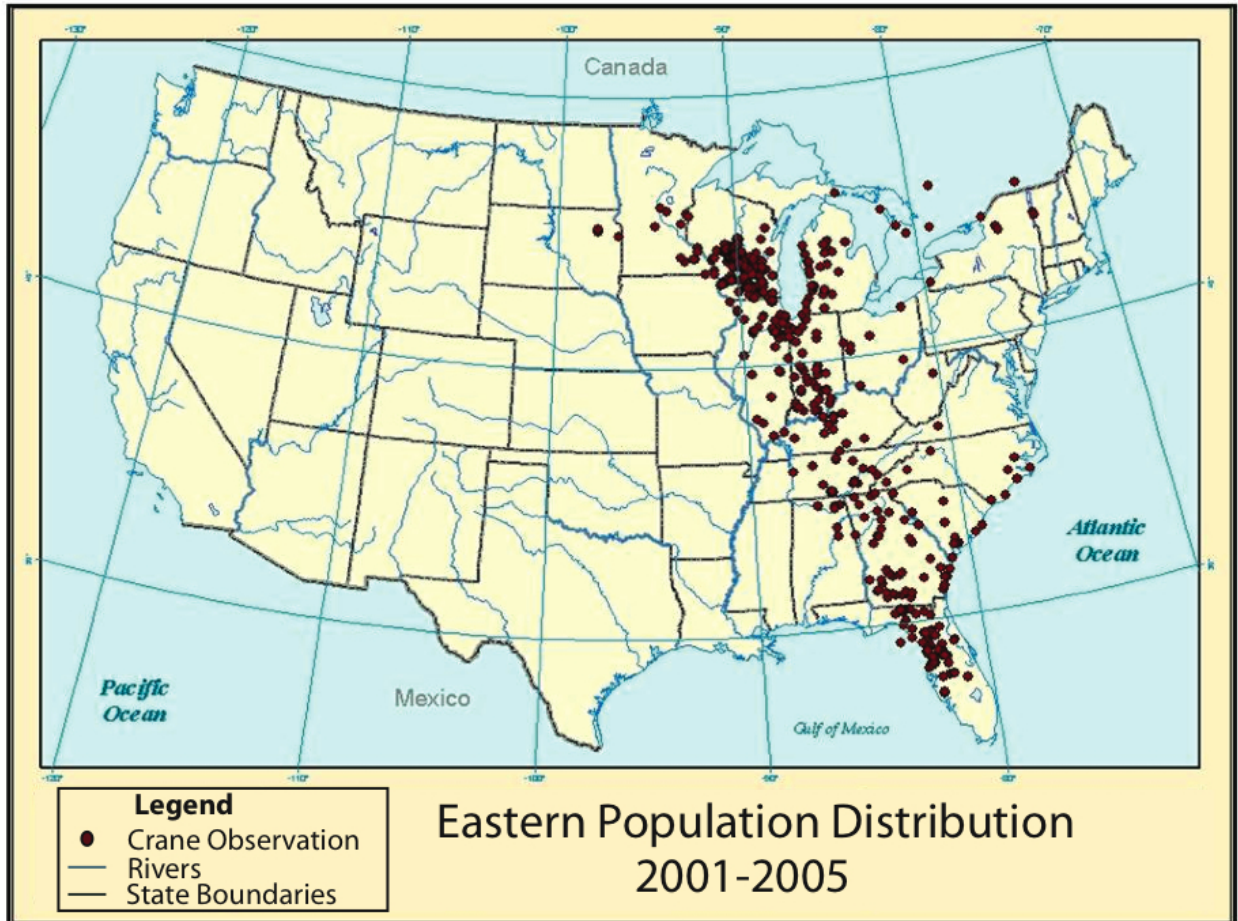
**Figure 2.** Breeding and wintering areas and primary migration pathway of the Aransas–Wood Buffalo population.

### 3.2.3 Eastern Migratory Population

In 2001, WCEP began reintroductions of a nonessential experimental eastern migratory population (EMP) of whooping cranes (refer to Legal Aspects of Recovery, Section 4.1). This growing population of at least 85 cranes (autumn 2006) is expected to annually migrate between its Wisconsin breeding grounds to wintering habitat in the southern U.S. Until WCEP goals are reached, approximately 20-30 whooping crane chicks from captive propagation facilities (if available) will be added each year to the Wisconsin wild release conditioning programs.



Two methods of migration conditioning have been successfully piloted through this program. Initially, all captive-reared crane chicks were conditioned to follow an ultralight aircraft from their training and release site at Necedah National Wildlife Refuge (NWR) in central Wisconsin to Chassahowitzka NWR on the Gulf coast of Florida (Fig. 3).



**Figure 3.** Eastern migratory population (EMP) migration flyway.

Beginning autumn 2005, this program was supplemented with the direct release of captive, isolation-reared crane chicks into groups of whooping or sandhill cranes. The chicks followed these birds from Wisconsin to the southern U.S. without ultralight conditioning and guidance. Project recovery plans outline ultralight-led migrations through at least 2010, or until the goal of a self-sustaining migratory population of 100-120 individuals and 25-30 consistently breeding pairs is achieved.

#### **3.2.4 Captive Cranes**

Captive populations at Patuxent Wildlife Research Center, ICF, the Devonian Wildlife Conservation Center, the Species Survival Center, and the San Antonio Zoo provide genetic material (chicks) for wild release and future captive breeders to ensure genetic retention of the species.

Nine North American locations hold 135 captive whooping cranes (March 2006).

Captive propagation centers include:

- 55 at USGS Patuxent Wildlife Research Center, Laurel, Maryland;
- 36 at ICF in Baraboo, Wisconsin;
- 20 at Devonian Wildlife Conservation Center, Calgary Zoo, Alberta, Canada;
- 8 at the Species Survival Center, Belle Chasse, Louisiana; and
- 9 at the San Antonio Zoo in San Antonio, Texas.

Additionally, whooping cranes are publicly displayed at the Calgary Zoo, Alberta, Canada; the Lowry Park Zoo (2), Tampa, Florida; the San Antonio Zoo, Texas; the ICF, Baraboo, Wisconsin; the Audubon Zoo (2), New Orleans, Louisiana; and the Homosassa Springs Wildlife State Park (1), Homosassa, Florida.